

In the Claims:

Claim 1 (currently amended): A structure comprising:

- a substrate having a top surface for receiving a die;
- a printed circuit board attached to a bottom surface of said substrate;
- a support pad attached to said top surface of said substrate, ~~said support pad being situated underneath said die,~~ said support pad being coupled to a ground bond pad of said die by a down bonding wire, said die being mounted on said support pad;
- at least one via in said substrate;
- said at least one via providing an electrical connection between a signal bond pad of said die and said printed circuit board.

Claim 2 (original): The structure of claim 1 wherein said die is a semiconductor die.

Claim 3 (original): The structure of claim 1 wherein said substrate comprises organic material.

Claim 4 (original): The structure of claim 3 wherein said organic material is selected from the group consisting of polytetrafluoroethylene material and an FR4 based laminate material.

Claim 5 (original): The structure of claim 1 wherein said substrate comprises a ceramic material.

Claim 6 (original): The structure of claim 1 wherein said at least one via provides an electrical connection between a substrate bond pad and said printed circuit board, wherein said substrate bond pad is electrically connected to said signal bond pad of said die.

Claim 7 (original): The structure of claim 6 wherein said at least one via abuts said substrate bond pad.

Claim 8 (original): The structure of claim 6 wherein said substrate bond pad is electrically connected to said signal bond pad of said die by a signal bonding wire.

Claim 9 (original): The structure of claim 1 wherein said at least one via provides an electrical connection between said signal bond pad of said die and a land, said land being electrically connected to said printed circuit board.

Claim 10 (original): The structure of claim 9 wherein said at least one via abuts said land.

Claim 11 (original): The structure of claim 1 wherein said at least one via provides an electrical connection between a substrate bond pad and a land, wherein said substrate bond pad is electrically connected to said signal bond pad of said die, and wherein said land is electrically connected to said printed circuit board.

Claim 12 (original): The structure of claim 11 wherein said at least one via abuts said substrate bond pad and said land.

Claim 13 (original): The structure of claim 11 wherein said substrate bond pad is electrically connected to said signal bond pad of said die by a signal bonding wire.

Claim 14 (original): The structure of claim 12 wherein said substrate bond pad is electrically connected to said signal bond pad of said die pad by a signal bonding wire.

Claim 15 (original): The structure of claim 1 wherein said at least one via comprises copper.

Claim 16 (original): The structure of claim 1 wherein said at least one via comprises a thermally conductive material.

Claim 17 (previously presented): A structure comprising:

- a substrate having a top surface and a bottom surface;
- a semiconductor die attached to said top surface of said substrate;
- a heat spreader attached to said bottom surface of said substrate;
- a support pad attached to said top surface of said substrate, said support pad being connected to said heat spreader;
- a first via in said substrate;
- said first via providing a connection between said semiconductor die and said heat spreader.

Claim 18 (original): The structure of claim 17 wherein said heat spreader is attached to a printed circuit board.

Claim 19 (original): The structure of claim 17 wherein said heat spreader is an electrical conductor.

Claim 20 (original): The structure of claim 19 further comprising a substrate down bond area attached to said top surface of said substrate.

Claim 21 (original): The structure of claim 20 wherein said first via provides an electrical connection between said substrate down bond area and said heat spreader.

Claim 22 (original): The structure of claim 21 wherein a semiconductor die ground bond pad on said semiconductor die is electrically connected to said substrate down bond area by a down bonding wire.

Claim 23 (original): The structure of claim 19 wherein said heat spreader is attached to a printed circuit board by solder.

Claim 24 (original): The structure of claim 17 wherein said heat spreader is a thermal conductor.

Claim 25 (original): The structure of claim 24 wherein said heat spreader is attached to a printed circuit board by solder.

Claim 26 (original): The structure of claim 17 wherein a second via in said substrate provides a connection between a signal bond pad of said semiconductor die and a printed circuit board.

Claim 27 (original): The structure of claim 17 wherein said first via provides an electrical connection between said semiconductor die and said heat spreader.

Claim 28 (canceled).

Claim 29 (original): The structure of claim 17 wherein said first via provides a thermal connection between said semiconductor die and said heat spreader.

Claim 30 (canceled).

Claim 31 (original): The structure of claim 17 wherein said substrate comprises organic material.

Claim 32 (original): The structure of claim 31 wherein said organic material is selected from the group consisting of polytetrafluoroethylene material and an FR4 based laminate material.

Claim 33 (original): The structure of claim 17 wherein said substrate comprises a ceramic material.

Claim 34 (original): The structure of claim 26 wherein said second via provides an electrical connection between a substrate bond pad and said printed circuit board, wherein said substrate bond pad is electrically connected to said signal bond pad of said semiconductor die.

Claim 35 (original): The structure of claim 34 wherein said second via abuts said substrate bond pad.

Claim 36 (original): The structure of claim 34 wherein said substrate bond pad is electrically connected to said signal bond pad of said semiconductor die by a signal bonding wire.

Claim 37 (original): The structure of claim 26 wherein said second via provides an electrical connection between said signal bond pad of said semiconductor die and a land, said land being electrically connected to said printed circuit board.

Claim 38 (original): The structure of claim 37 wherein said second via abuts said land.

Claim 39 (original): The structure of claim 26 wherein said second via provides an electrical connection between a substrate bond pad and a land, wherein said substrate bond pad is electrically connected to said signal bond pad of said semiconductor die, and wherein said land is electrically connected to said printed circuit board.

Claim 40 (original): The structure of claim 39 wherein said second via abuts said substrate bond pad and said land.

Claim 41 (original): The structure of claim 39 wherein said substrate bond pad is electrically connected to said signal bond pad of said semiconductor die by a signal bonding wire.

Claim 42 (original): The structure of claim 17 wherein said first via comprises copper.

Claim 43 (original): The structure of claim 26 wherein said second via comprises copper.

Claim 44 (previously presented): A structure comprising:

- a substrate having a top surface and a bottom surface;
- a semiconductor die attached to said top surface of said substrate;
- a heat spreader attached to said bottom surface of said substrate;
- a support pad attached to said top surface of said substrate, said support pad being connected to said heat spreader;
- a first plurality of vias in said substrate;

said first plurality of vias providing a connection between said semiconductor die and said heat spreader.

Claim 45 (original): The structure of claim 44 wherein said heat spreader is attached to a printed circuit board.

Claim 46 (original): The structure of claim 45 wherein a second plurality of vias in said substrate provide connections between a plurality of signal bond pads of said semiconductor die and said printed circuit board.

Claim 47 (original): The structure of claim 44 further comprising a substrate down bond area attached to said top surface of said substrate.

Claim 48 (original): The structure of claim 47 wherein said first plurality of vias provide an electrical connection between said substrate down bond area and said heat spreader.

Claim 49 (original): The structure of claim 48 wherein a ground bond pad on said semiconductor die is electrically connected to said substrate down bond area by a down bonding wire.

Claim 50 (original): The structure of claim 44 wherein said first plurality of vias provides an electrical connection between said semiconductor die and said heat spreader.

Claim 51 (original): The structure of claim 44 wherein said first plurality of vias provides a thermal connection between said semiconductor die and said heat spreader.

Claim 52 (original): The structure of claim 46 wherein said second plurality of vias provide electrical connections between a plurality of substrate bond pads and said printed circuit board, wherein each of said plurality of substrate bond pads is electrically connected to a respective one of said plurality of signal bond pads of said semiconductor die.

Claim 53 (original): The structure of claim 46 wherein said second plurality of vias provide electrical connections between each one of said plurality of signal bond pads of said semiconductor die and a respective one of a plurality of lands, said plurality of lands being electrically connected to said printed circuit board.

Claim 54 (original): The structure of claim 44 wherein said first plurality of vias comprise copper.

Claim 55 (original): The structure of claim 46 wherein said second plurality of
vias comprise copper.

Claims 56-71 (canceled).